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Gram Sevak

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OFFICE OF THE ...
27 AUG 1958
RURAL-EXTENSI...

Students building an irrigation bund across the Gajeng river, Assam

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Moolianwala women discuss their problems with the S.E.O.

OFFICE OF THE PRINCIPAL
27 AUG 1958

मज़दूर मंज़िल
ग्राम सेवक

GRAM SEVAK

Asadha-Sravana 1880
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SELF-HELP IN AGRICULTURE

M. S. Sivaraman,

Adviser, Programme Administration,
Planning Commission.

In an undeveloped agricultural country like ours, agriculture has to play a significant role in fostering industrialisation, in raising the level of rural life through a more efficient and diversified use of land and human resources. While our human resources are plenty, the available land which can be economically exploited is limited and cultivation has been already extended to all such lands. The average yield of crops in India is among the lowest in the world. Fourteen years ago when Dr. Burns reviewed "the Technological Possibilities of Agricultural Development in India" based on work done on scientific agriculture all over the country, his conclusion was that "Indian soils were at a stage in which on the whole there was neither increased nor diminished production" and "it was probable that in most parts of India soil fertility was stabilised at a low level."

But if the country is to forge ahead, agricultural production has got to be stepped up to feed and clothe a growing population which is now ill-fed and ill-clad. Some of the basic raw materials required for the present and future industries have also to be grown on land. Exportable surplus of agricultural commodities in demand in other countries have to be produced from land in order to earn the foreign exchange required for rapid industrialisation. Agricultural production has also to be pushed up to keep down the inflationary trends that arise from an accelerated growth of public and private expenditure. Keeping all these in view the annual target for additional agricultural production at the end of the Second Plan period was fixed at 27.8 per cent and this includes an extra food production of 15.4 million tons over 65 million tons produced at the end of the First Plan.

If the conclusions of Dr. Burns are correct, the question will naturally arise whether we are justified in expecting so much from agriculture. Already the pessimists among us point to our growing dependence on imported wheat and rice even to maintain the present low standard of nutrition. When we find that the problem of feeding the present population of about 360 millions can be solved only by importing cereals how can we with an unexpanding cultivated area meet the needs of a population of over 500 millions 20 years ahead ? If the present population has to depend mainly on cheaper forms of energy like cereals some of which has to

be got from outside, can we at all raise sufficient quantity of protective foods like milk, eggs, meat, which require a larger area of surface than the cereals for producing a like amount of energy?

I shall attempt to answer some of these questions that may arise in your mind and show that while the conclusions which Dr. Burns reached hold good even now, a method has been developed for circumventing the stalemate of a stabilised low yield and stagnant economy. The Community Development movement has to work out this method on every field and in every village as has been stressed by the Deputy Chairman of the Planning Commission in his address at the recent Mt. Abu Conference.

In dealing with agriculture, it is not often realised that we are dealing with Plant life which is subject to certain biological laws that can only be defied at our peril. Like other forms of life, plant growth depends upon the proper supply of the necessary growth factors that support such life and the ultimate growth is conditioned by that growth factor which is present in relatively least quantities. All over India soil Nitrogen which is an important growth factor in Agriculture is restricted in supply in the root zone of most agricultural crops as a result of the intense biological activity that takes place in the soil under tropical conditions. At the present low average level of production, the major agricultural crops in India remove over 3.8 million tons of Nitrogen from the land but the quantity supplied by way of manures and fertilisers is less than a million ton. The balance in the offtake of Nitrogen is made good through natural recuperative processes that take place in the soil and outside and through the uncollected waste products of plant and animal life. As a result a complete cycle has emerged and a low level of production has been set up at a level determined by the meagre supply of soil Nitrogen. Therefore no effort for improving total production will succeed unless the overall deficiency of Nitrogen is made good on cultivated areas. Any spectacular yield obtained by heavy manuring of some fields at the expense of others cannot result in an improvement of total production in the country when the total supply of manure has not appreciably gone up. This is a point on which some special emphasis has to be laid, as there is a tendency to believe that improved methods of cultivation can take the place of improved manuring in the order of priority of measures for developing agricultural production.

There are various ways in which Nitrogen can be supplied to crops and the most obvious that will occur to those who are unfamiliar with the actual conditions in many parts of India is an extensive application of fertilisers like ammonium sulphate to most cultivated areas. While fertilisers are useful under irrigated conditions, we have to remember that more than 75 per cent of the cultivated area depends entirely on uncertain rains. Under these conditions the application of fertilisers may deplete the soil moisture by stimulating early growth leaving the crop to wither away at the time of flowering or setting of seeds if there is then no sufficient moisture in the soil.

The most important source of soil Nitrogen which can be used in all cultivated areas is the farm-yard manure but this is limited in supply, as a large portion of cattle dung is burnt for want of other forms of cheaper fuel. It is quite possible that with rapid growth of urban population more of cattle dung will be burnt in the future but if we can produce sufficient manure of equal fertilising value in the rural areas directly from plant wastes, like leaves and twigs, we should have found a solution to the problem of Nitrogen deficiency. The major crops yield no sizable plant wastes and no active measures have been taken on a country-wide scale to produce more of plant wastes which can be used as manure directly in the form of green manure or indirectly after composting. Taking an overall picture of over 350 million acres of cropped area, we should aim at producing about 4 tons of plant wastes per acre without depleting soil Nitrogen or soil moisture or any of the other growth fac-

tors to the detriment of the crops now grown. Such a colossal task cannot be fulfilled unless the required plant materials are produced on the spot within each unit of cultivated area.

In some ways we are fortunate that the soil deficiency is of Nitrogen and not of the other growth factors like Phosphates or Potash which will have to be got from outside; for Nitrogen from the air can be synthesised into organic manure with the help of leguminous plants which directly utilise atmospheric Nitrogen through certain bacteria found in their root nodules. If every cultivator can grow the manure for his fields without affecting the crops now grown he need not depend on extraneous supplies for the present until a stage is reached when the yields are stabilised at a new high level. The present depressing cycle of poverty, low yield and inability to improve will be broken and then the cultivator can lift himself up from stagnation.

As a result of work done in the composite Madras State it can be confidently stated that on every holding in that State irrespective of its size, it is possible to produce without affecting the usual crops the complete requirements of organic manure by way of composts for use on dry and garden lands and green manure for use on irrigated lands or in areas of abundant rainfall by border planting of green manure shrubs perennial or annual. The soil and climatic conditions in Madras are very diverse and the results obtained will apply equally well to the different parts of India where conditions are not different.

Mass campaigns have to be organised in all parts of the country to explain the feasibility of producing the required organic manures on every field without losing any of the usual crops. The enthusiasm of the cultivators has to be created and kept up by systematic publicity in every village. The village level worker has to play a leading part in this. He has to organise the publicity meetings and approach individual cultivators and induce them to grow the green manure plants for producing seeds and the shrubs for producing the organic wastes required for composting. He should supply small packets of green manure seeds or the nucleus of plant materials of perennial shrubs for mass planting. He has to enlist the full co-operation of the village panchayat, the village co-operative organisation, school teachers, village officials and leading villagers. Everyone who has any local influence should be urged to distribute the packets and see that the green manure plants are grown on the margins of fields and the perennial shrubs are raised wherever possible. A definite programme should be drawn up for producing the manure rerequired for all fields in any village within two years. A list of green manure plants suitable for the different types of fields in the village should be prepared by the Agricultural Department, the requirements of seeds and cuttings estimated and timely steps taken to ensure that the seeds and cuttings are in the cultivators' hands in time.

I have so far laid great emphasis on self-sufficiency in manures, for more than any other factor, manures dominate the field of production when crop yields are low. There is however a tendency among some to give this pride of place to "Improved Seeds" and it is forgotten that without extra manures, improved seeds with their larger offtake of plant nutrients will depress the present low yields after a time. But when once an unfailing supply of manures is assured, the use of improved strains of seeds and plants will play an increasingly great part in the development of agricultural production. In the future, improved seeds will also play another important role in helping to reduce the pressure on agricultural labour by extending the duration of some of the labour intensive phases of cultivation like sowing, transplantation and harvesting. This is a matter of great significance in a developing economy during the transition from Agriculture to Industry. A more directed attention has therefore to be paid to this aspect of plant breeding which helps to evolve high yielding strains of different crops with different optimum periods for sowing, transplantation or harvesting.

A change in the cropping pattern by use of such seeds will enable a reduction in the surplus rural labour force which now attends merely to certain phases of cultivation during certain peak periods and remains virtually unemployed during the rest of the year.

A few decades ago Plant Breeding was an art, but with the rapid progress of cytogenetics there has been considerable advancement in Plant Breeding as a science. The present day plant breeder confidently knows how to evolve new types with desirable economic qualities, genetic potentialities of higher yield and capacity to overcome adverse environmental conditions like drought, salinity, defective drainage, etc. He can build up disease resistance in the crop and adjust the duration of the crop to varying conditions of soil and climate. With the advance of scientific techniques, research workers in many parts of India have evolved many improved strains of crops and plants to suit local conditions and many more new varieties are being evolved, but the extension of these to the cultivators' lands has lagged behind and in many States the use of improved types except in the case of cotton and sugarcane has not spread to more than 10 to 20 per cent of the area for which such strains have been evolved.

In any scheme for spread of improved seeds, proper storage of the seeds is very important. The seeds have to be periodically dried to keep up viability and at the same time care has to be taken to prevent admixture with off types. Every time the seeds are dried there is a risk of loss through dryage, pilferage, damage by birds, squirrels, etc. Most of the seed stores lack facilities for drying and therefore the stored seeds deteriorate rapidly in condition. In order to overcome some of these difficulties it is necessary to reduce the quantity handled through the seed stores and decentralize storage and distribution of seeds as far as possible so that the cultivator obtains his requirements directly from local producers and looks after the seeds which he will use during the next season.

In the past, many extension workers have contented themselves by supplying improved seeds only to select leading cultivators and further fresh supplies have been made mostly to the same people. No doubt there has been some natural spread from these to others but such a method of restricted distribution will not take us far. An earnest endeavour should therefore be made to adopt a workable plan in which the cultivators will play a leading role in saturating every field with the improved types.

Each village has to be taken as a unit in itself and a programme should be drawn up with the help of the village panchayat and leading cultivators to cover every holding with the available improved varieties. The Village Level Workers should prepare a complete list of the improved strains suitable for each of his villages, the areas to which these can be spread and the quantities of seeds and plant materials required for this purpose. The nucleus stock of seeds and plants should be obtained from the State farms and the aim of the Village Level Worker should be to produce under careful supervision and distribute every year a quantity of seeds which when developed in one cropping season will by the time of the harvest produce the seeds required for the entire cultivated area under that particular crop in the village.

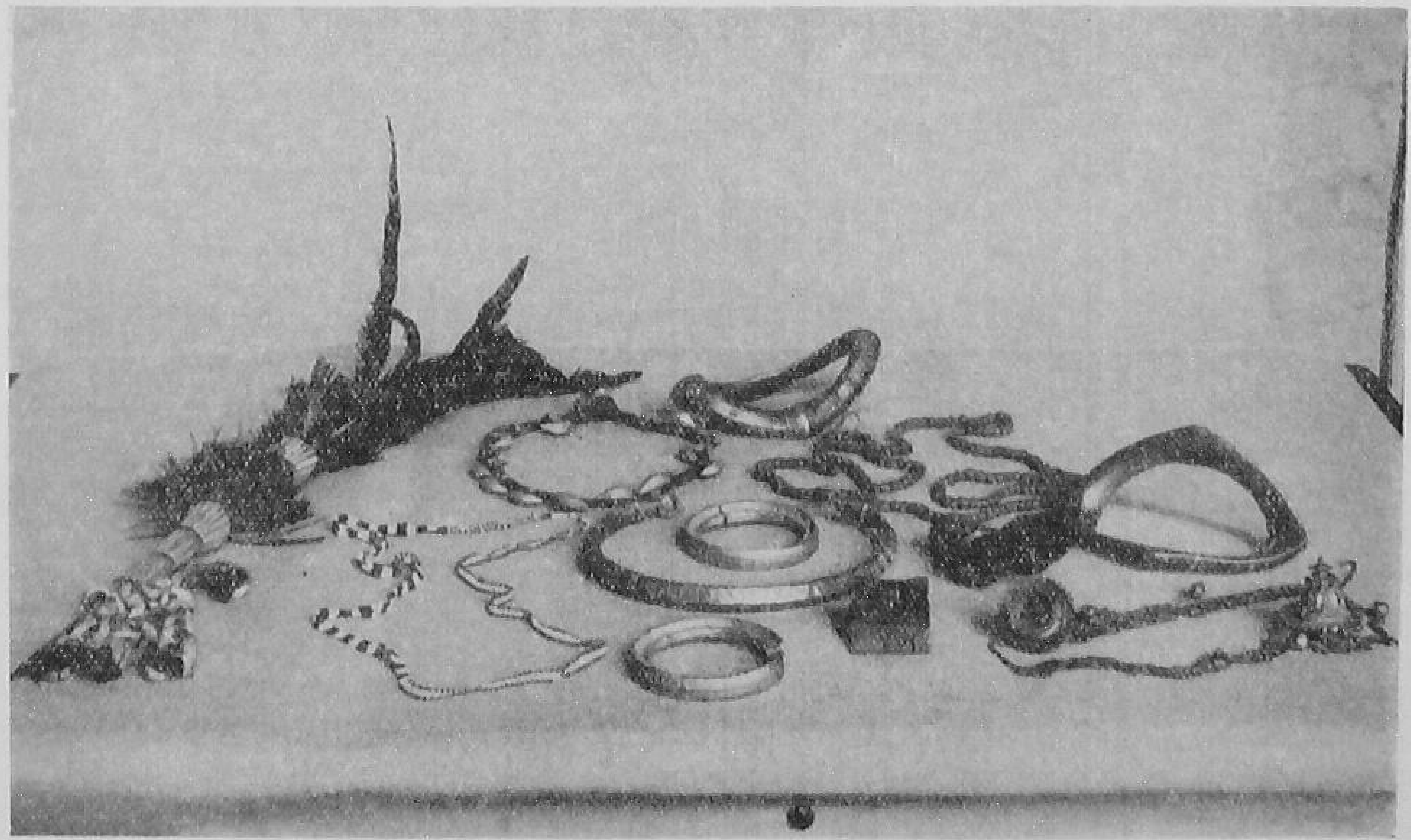
Thus, if in a village one thousand acres of irrigated paddy are cultivated the seed requirement for paddy for the village may be about 40.000 lbs. Assuming that the Village Level Worker starts with only 40 lbs. of nucleus seeds sufficient for an acre, it is not difficult to develop the seeds to 2,000 lbs. at the end of the first season. During the next season 1,000 lbs. out of this are distributed for further development in the village itself. There will then be a production of 50,000 lbs. of seeds, i.e., more than the requirements of the entire village at the end of the second season. The skill of a Village Level Worker will lie in planning ahead, entrusting the work of development to responsible ryots selected by the other ryots and arrang-

ing with these seed farm growers to fix posters on the land to indicate the types raised, to have the crop inspected from the time of flowering to remove the off-types, to get the fields harvested separately and get the improved seeds exchanged immediately after harvest for the grains raised by the other cultivators. A scheme of this type was successfully carried out even in one season itself in Tanjore District in 1954 to cover two lakhs of acres of paddy in the Kumbakonam and Mayuram Sub Divisions and in the enthusiasm then created, the exchange of seeds was done on an equal basis.

By producing the improved seeds in every village the cultivators who have not hitherto used such seeds will be in a position to appreciate the superiority of these seeds under local conditions. By limiting the seed supply to the quantity that would produce the requirements of the village at the time of the harvest, the agricultural department is able to pay greater attention to the purity of the nucleus seeds supplied. Large scale procurement and transport of seeds are avoided and the cultivator depends on trusted local ryots for timely seed supply. By getting physical possession of the seeds even at the time of the harvest, the cultivator is in a position to look after the seeds carefully. The village seed farms therefore help to foster self-help and extend the spread of improved seeds cheaply and quickly in all villages.

I have confined my attention only to two of the major approaches to the problem of increasing agricultural production which require very little of investment of money. These approaches have yielded tangible results in the Southern States and can be successfully adopted by the farmers everywhere. Except for an initial supply of inexpensive nucleus materials, the programmes depend upon self-help and local initiative. It is a mistake to think that the farmer can produce more only if there is a constant supply line of credit and facilities from year to year. A change in the emphasis from "supply" to "self-help" is a welcome development in the Community movement and I am certain it will inculcate a sense of local pride in achievment through local efforts and usher in a period of abundance.

(*This article is based on the lecture recently delivered at the Central Institute of Community Development, Mussoorie*).



Some of the ornaments of the Adivasis of India

TEEN-AGERS

A. Kolandaivelu,

Gram Sevak, Tirrupur Block, Coimbatore

THE sign board read—"Podunala Seva Nool Nilayam". It was an imposing sign board in front of the one-room village library which I was visiting for the first time at the request of its members—all in their teens. The word *Seva* in the long name drew my attention. I could not understand how that word fitted into the name of the library. Inquisitive as I was, I asked the members present—ten in number—as to whether they were aware of the correct implication of the word *Seva*. Before they could answer I shot forth another question—"What services have you rendered to the public so far to justify the word *Seva*?"

Their reply was a modest one—"We have built a children's park Sir, through *Shramdan*. We are keen to do more for the village, but there is none to guide us, give us ideas."

I was yet to be convinced of what they said. And so I said: "I will arrange a grant of Rs. 100 for your library for purchase of books provided you contribute your share of Rs. 100. But before that I must be shown some sort of social service in the actual field to justify the word *Seva*. Otherwise I would suggest you to drop the word from the name of the library before I can fulfil my promise.

Most likely my suggestion was too much for the young members to swallow. To my surprise they declared in one voice, "Sir, you think that we have included the word *Seva* in the name only for pleasure. Far from it. We are prepared to prove our intention in the actual field right now. Please suggest any sort of service, big or small, high or low. We will undertake the job right now."

It was a challenge to me. But I was prepared for it. I thought of striking the iron when it was hot. "Alright, go and fetch some baskets, spades or crowbars," I bade them. Within few minutes all the members were present before me, each with a basket, a spade and a broom. They had even brought a spare spade for me also. In that grey afternoon I headed the column into the village Anuppalayam where I was camping for the last five days. I had come to the place to enquire as to how industrial loans could be given to the brass metal workers of the village.

The sanitary condition of Anuppalayam was not satisfactory. Villagers allowed the sewage water to flow freely on the roads. There was no drainage, no soak-pits. I had decided to provide the drainage and soak-pits to the village through these young men. We started the work from the south digging drains, and soak-pits for the water to flow in and accumulate, removed all dirt and rubbish that were heaped on the streets. For more than three hours—from 5 p.m. to 8 p.m. we toiled. No time was wasted, no rest was taken. I was surprised to see how hard these youngsters laboured. They did not hesitate even for a moment to touch the rubbish or carry the stinking mud on their heads to safe distances. This selfless work of the youngsters had the desired effect. Those who had gathered to see the "fun" joined our ranks. In no time our number swelled to 30. The headmaster of the Elementary School was one of the most enthusiastic sight-seers who joined the work. At about 8-30 p.m. in the evening our work came to an end. By that time a considerable portion of the village road had been made passable, several soak-pits and road side drains were dug.

I was very much satisfied with the youngsters. But they were even more satisfied with the work they had put in. It was then their turn to demand more from me. While we were taking leave of each other for the night, the young members of Podunala Seva Nool Nilayam said that they were prepared to work on this type of projects anywhere, no matter whether it was in their own village or outside, and urged upon me to organise this type of work frequently in the area.

What wonderful changes we could bring to the villages, with this type of young and enthusiastic teen-agers!

SLOW BUT SURE

Bharat Singh Negi,

A.D.O. (S.E.), P.I.D. Block Bhillangna, Tehri-Garhwal

DURING December 1957, Normalised Block Bhillangna, Tehri-Garhwal organised four Women's Camps of 21 days duration to impart reorientation training in some home crafts. Each camp enrolled 30 trainees. The Gram Sevaks and Gram Lakshmis approached the Gram Sabha Pradhans and particularly the head women in the families. Very few liked the idea of sending their daughters and daughters-in-law to the camps, as they thought this would pollute their families. The very idea of their daughters learning dancing, singing, knitting, stitching and cooking in the open was considered strange, especially by the old ladies.

Anyway the camp ran quite smoothly at Baheri. The closing day function was attended by men and women of the neighbouring villages. The guardians were invited. The non-sympathisers too grudgingly came to see the function. The day's programme was rounded off by cultural, literary and recreational activities. Folk songs and dances were highlights of the day's programme. The articles prepared by the campers were exhibited. The entire programme was conducted by the campers themselves.

"The daughter of Budhoo has done very well", some one whispered and it reached the ears of all present. The A.D.O. (W) stood up and proudly exhibited the sweater knitted by Smt. Shusila, the jelly prepared by Kamla, the blouse stitched by Janki Devi and so on. The village women began to look at each other as if they wanted to say something by way of appreciation. Kumari Pramila's dance turned malice into sympathy and appreciation.

When the function was nearing the end, an old lady to the amazement of all asked as to where and when the next camp would be held. "The camp is really useful, and I want to send my daughter-in-law to the next camp to learn domestic science." she said. I noticed a change in the attitude of the old women but it was too early to feel elated.

Next month I have had a chance to make a round of villages in the area to see the reaction the camps had on the villagers. It was almost sunset when I reached the village. What I saw was something I never did expect. A young lady whom I could not recognise, was talking to a large group of village women about Smokeless Chulah and its usefulness. To make her point more forceful, she cited the example of Kalloo's mother who had lost her eye sight early in her life because of the smoke from the conventional Chulah. The women nodded their heads in assent.

Next day in the neighbouring village a particular incident which I came across made me happy. I saw a mother from a distance bathing her child in a clumsy and unhealthy manner. Suddenly her 14-year-old daughter, appeared on the scene, and showed the mother how to bathe the child. When I went near the spot I found the girl to be one of those who had joined the Camp. She recognised me, too. I thanked her for correcting her mother. She laughed, and then took me round the village, and showed the changes that had taken place after the Camp. It was an encouraging change, no doubt.

There is some bond of friendship between members of a family, but I am not attracted by it. I feel most of it is motivated by self-interest. I see brothers falling out amongst themselves when they get married. Every brother sets up a separate home. I lived for some years in a family, and ours was, in many ways, an ideal family. I had deep regard for my parents and yet I ran away and left my home. Attachment that the members of a family feel for one another is a different thing. I am not talking about it. I am talking about the friendship and attraction that a devotee of God feels for another devotee. It is incomparable.—*Vinobaji.*

RAFAT DID IT

S. A. Katti,

S.E.O. Kalamnuri, C.D. & N.E.S Block, Hingoli

IT WAS a sunny afternoon. Some of the village leaders had collected in the village school for discussion. After some talk I asked them: "Well! what about the Gram Sevak? Do you find him helpful?" They looked at each other and then one of them replied: "Gram Sevak? Who is he? We have never seen his face?"

I was surprised. "How is that? Then who gives you the improved seeds? Who conducted those Demonstration Plots? Did not anybody of the Block staff help you in starting the Agricultural Co-operative Society?" I enquired. "No body from the Block staff," said an old man. "In fact, we are really grateful to our young friend Rafat. He is no doubt young in age, but his ideas are better than many of us, old men. He does not belong to this village, but he has become one of us. It is he who is behind all the works you have mentioned. Whenever we find any difficulty we just ask Rafat to help us. The Agricultural Co-operative Society which you see today started from his idea. One day he told a few of us, "Chacha, why don't you all join together and start a society like that? It would benefit you all." We did not know what an Agricultural Society was. That's why we asked him to help us in the matter. And three days afterwards he was at this very place along with the Co-operative Sahib from the Block. Both Rafat and the Co-operative Sahib told us all about the society; we joined hands and started it. Rafat helped us at all stages. A fine boy he is. Why don't you appoint him as the Gram Sevak?" said the old man. All others present together repeated his suggestion.

I was rather intrigued as to who this Rafat was. So I querried "Who is this Rafat? Is he the short-statured Rafat Sharif—our Gram Sevak."

It was now their turn to be surprised. They all said with one voice, "Yes, yes, he is short statured, and his full name is Rafat Sharif. But he never told us that he is the Gram Sevak. A very naughty chap, isn't he?" and they all burst out laughing.

It was a happy revelation to all of us. I was really glad to learn how Rafat had won over these simple villagers. How he has become one of them, without letting them know that he was a Government employee.

This removed my long-standing doubt about his popularity. It happened some two or three months ago. One afternoon, by about 4 p.m., the B.D.O. asked Rafat to arrange a meeting in the village Umbra in connection with the Prohibition week. Rafat left immediately for Umbra to arrange the meeting. By about 6 p.m. in the evening when we in the company of the B.D.O. reached the meeting place, we were astonished to see the large gathering. More than 400 people, both men and women, had assembled at the meeting place. There were many amongst them who had come from the nearby villages. A gathering of 400 people in a small village like Umbra was a unique thing. We wondered how Rafat could arrange it within such a short time.

There was another incident which flashed before my mind's eye. One night I had to go to inspect an adult education class at Shivni. I asked Rafat to accompany me, which he did with the least hesitation. After the inspection, when we were returning I found him shivering like a palm leaf. I enquired as to what was the cause, was he ill? Rafat replied in the most casual manner that it was because of a bad cold which he had contacted since the last two days. When I touched his body, I found it to be quite warm. He was running temperature. Disapprovingly I told that he ought to have told this thing earlier to which Rafat replied, "How could I tell you that I was running temperature. In that case the work would have suffered and that for me only."

THE GRAM SAHAYAKS

E. Desingu Setty

Gram Sevak, Renigunta Block, Andhra Pradesh

THE village G—is a fairly big one with a population of over 1,200. It is the Group Headquarters of the Gram Sevak and is situated at a distance of 3 miles from the Block Headquarters. The village consists of landlords, peasants of small holdings, agricultural labourers and others. Nearly 30 per cent of the population are literate. Some of them are graduates and some learned *pundits* too.

But all the same, the village from the very start of the programme in March 1956, had remained a serious headache to the Extension staff. The people were very critical of everything new one proposed to start. There was practically no unity amongst the villagers. That was the reason why the Panchayat was ineffective. The Extension Staff had tried many times to bring the people together and start some work which would benefit the village. But all their efforts had gone in vain. Nobody paid any heed to what they said. There was a time when the Gram Sevak, worried about such failures, thought of resigning the job.

When every body had lost hope, something unusual happened. Eight months back it was decided to open a Gram Sahayaks' Training Camp in the village G. The President of the village Panchayat and three others were selected for the purpose, and persuaded to attend the camp. They did not agree at first, but later on consented to join the camp, probably to see what was going to happen there. The camp started on the fixed date. A few days passed. Then it was found that the Panchayat President had got interested in the programme. Discussion on better methods of farming and field demonstrations appealed to him most.

After the camp was over, the village Panchayat President and the three others, who have been trained in the camp, were seen talking to the villagers about improved methods of farming. Later on they persuaded them to adopt the new methods. Villagers of their own accord also came to them for advice.

What the Extension staff failed to do in one and half years, the Gram Sahayaks' Camp did within a few days. People's enthusiasm was roused. The Extension Staff saw that the opportune moment had come. They began applying their weapon of moral persuasion; and this time it proved to be a success.

The village school building was small and inadequate, there was no children's park in the village. So it was thought that efforts should be made to construct a children's park first with the help of the villagers. The Panchayat President and another newly trained Gram Sahayak took the lead. They amongst themselves donated 30 cents of land valued at Rs. 1,500 for the purpose. Other villagers came forward.

Now stands at the site a green little park where children of the village play and shout about. This was just a start. On the plot adjacent to the park the construction of the school building is making quick progress. It is a joint venture of the villagers and the Block. The villagers have contributed their share in cash and kind to make the project a success.

> It is open to the world to laugh at my dispossessing myself of all property. I would like people to compete with me in my contentment. It is the richest treasure I own. Hence it is perhaps right to say that though I preach poverty, I am a rich man!—*Gandhiji*

PEOPLE

ALAN MONK HOUSE

He is over 70, but looks like 50 and has the gait of a man of 30. He is Mr. Alan Monkhouse—a New Zealander. His six years of life in India has the imprint of his 40-years stay in England and Russia.

His views: India is concentrating too heavily on the heavy schemes; and not sufficiently on the small industries. He came to India under the Colombo Plan; carried out on exhaustive survey of country's hydro-electric resources. Came with the idea of huge hydro-electric schemes, but soon he changes his ideas.

His idea: The need of the moment is power; heaps of power, thousands of small engines and air-powered engines. In India, he says, there are still half a million towns and villages without power, i.e., electricity. Supply these with power at the earliest and you will see what a change it will bring to the country.

His six-years of stay in India has helped him to understand many of the problems, particularly those of the Himalayan region and he has tried to find solutions. "Power and power alone is the most important need of the people of Himalaya region," he says. This need can be quickly served he feels, if thousands of mountain streams and the strong gusts of wind that blow up and down the mountain surface day and night are harnessed. He is not content only with thinking. He is a practical man and has evolved small and cheap engines which would solve the problem. He has already designed a small water-turbine which can be made from locally available materials and will cost between Rs. 600 to Rs. 800 a Kilowatt. By day the power could be used in small industry and by night for heat and light. Yet another invention of his is a small wind-mill operated turbine. The construction is from locally available materials and cost very cheap. It works on the principle of air and water-turned prayer wheels very common to Buddhists Himalayas.

The idea was to harness wind-mills directly to grind stones and have power left over for generation of electricity. Old in age but young in ideas, this foreigner Mr. Monkhouse is a real friend of the country.

JOSEPH

Shri K. V. Joseph is an important person. He is the President of Arakuzha Panchayat of Muvattupuzha C.D. Block, Kerala. But that does not give the true picture of him. Right from the day the Block was started, Shri Joseph has extended his help and co-operation in all fields of development. With his help and co-operation the Block could open 3 miles of road, dig two wells, construct one bathing ghat, open one recreation centre, instal about 13 pump-sets for irrigation purposes and establish one Health Centre. He has been the Key man for developmental activities.

ABAANAM

Avoly, today, is an outstanding village of Muvattupuzha C.D. Block. But few years back, it was very much like other villages of Kerala. There was no pucca road, no bathing ghat worth the name; the children played amidst dust and dirt, the electric line only touched its fringe. That neither meant that the villagers were lazy nor that they had any intention to develop the village. They felt as keenly for the village as they are doing now. But the question then was where to find funds for the purpose and who was to lead and guide them.

No sooner the Community Development Block was started there appeared on the scene as a leader Sri Kallarrakkal Abraham, an old resident of the village. Shri Abraham could see what the facilities offered by the C.D. Programme meant for Avoly. He was eager to avail of the facilities, and therefore started

(*Continued on page 11*)

FACTION UNITES PEOPLE

Gurpaddapa

S.E.O., C.D. Block, *Homnabad, Mysore State*

KALLOOR is a small village in Mysore State about 8 miles away from Homnabad, the Block headquarters. The main road runs close to the village. It is hardly 2 miles away; even then there is no road connecting the village with the main road. The reason is not far to seek. This stretch of 2 miles is a rugged land, full of rocks and cut into deep nullahs. Even bullocks carts dare not cross this stretch of land. As a result Kalloor remained practically isolated.

An approach road was the most urgent need of the village. The Block Advisory Committee this year discussed the problem and recommended the construction of the road. The plan was prepared. Some village leaders contacted the B.D.O. and the Gram Sevak and offered to take up the earth work as the people's share of contribution.

Every thing at the outset appeared to be in order. The work commenced amidst great popular enthusiasm. In record time a furlong of road was laid. Achievements of the previous day urged the villagers to put in more hard labour the next day and record greater progress. When everything was going on smoothly, there arose a trouble which nearly ruined the project.

Some of the influential village leaders suddenly objected to the Shramdan work and demanded construction of an entirely new route which would touch their fields. This sudden change in their behaviour was born out of wounded vanity. They thought that they had not been given due recognition in the set-up and hence the strange attitude. The new route demanded was more expensive and technically not sound. The B.D.O. discussed with the dissident group, explained to them the difficulty, but they were obstinate.

The work came to a stop. The village was divided into two rival camps. The village peace was nearly broken. The B.D.O., determined to settle the matter, came to the village with me and the V.L.W. A meeting of all the villagers was called. The situation was explained, and the villagers were asked to come to a decision. They discussed for two long hours but no conclusion was reached. The B.D.O. thereafter tried another method. He picked out four leaders from each group, asked them to sit together, discuss the matter and arrive at a decision. He also informed them that unless the villagers agreed to start the work, he would withdraw the sanction for the approach road, and Kalloor would remain cut off as before. This indirect threat acted like magic. Within 15 minutes the rival leaders came forward hand in hand and declared that they had agreed to resume the Shramdan work jointly again. The villagers present immediately voiced their approval. The difference that separated the villagers vanished. Every one was mad with joy and excitement.

We were overwhelmed by their joy and simplicity. I could see how powerful was the spirit of rural India. No selfish motive could keep them in check for long!

PEOPLE

(*Continued from page* 10)

rousing enthusiasm of the villagers for developmental work. Had it not been for his leadership, Avoly today could not have boasted of its bathing ghat which is the best in the entire C.D. Block. The children today do not play amidst dust and dirt. They have got their Children's Club, with a pucca building of its own, where they flock to play. The village has got about 3 miles of pucca road. The electric line has been extended by 1½ miles.

These are but some of the results which villagers' co-operation under Abraham's leadership has achieved for Avoly. Himself a progressive farmer, Abraham has helped others to adopt improved techniques. Keen to develop the village, he has donated some portions of his valuable land for the benefit of the village community. The villagers have accepted him as their leader and in their turn have made him the Vice-President of Avoly Panchayat.

HURDLES CROSSED

S. P. Deshmukh
B.D.O. Jalgaon

R. M. UMALE was a demonstration Kamdar in the Agriculture Department before he became Gram Sevak. The first village to which he was posted as a Gram Sevak was Khandvi in Jalgaon C.D. Block. Khandvi was a backward village. The inhabitants were mostly poor. Their ideas about development work were old and orthodox and above all they were divided.

Umale was new to extension methods. But he was keen to take up some development work in the village. He was in search of an item of work which would be of interest to the villagers. The village school was the first to attract his notice. It was a dilapidated building in which the school was accommodated. The villagers used to gather at the school for gossip and for idling away their time. The proper atmosphere was absent. Umale thought that the village school should have a building of its own. He decided to give shape to his idea with the help and co-operation of the villagers.

Accordingly a meeting of the villagers was called at the village *chawdi*. Few came to the meeting. Umale explained to those present the need for a separate building for the school. He played upon their vanity. After some discussion it was agreed that the village school should have a building of its own. The Gram Sevak was asked to give an idea about the probable expenditure. Umale immediately came out with his plan. "A two-roomed school building would cost near about Rs. 4,000. If the villagers could contribute half the amount either in the shape of cash, kind or labour, the Block would give the remaining half," said he. The villagers thought over the matter. Proud as they were, they decided that the contribution would be only in cash. Before the meeting came to an end a list containing the names of donors and the promised amounts was prepared.

Umale felt very happy. He thought that his first attempt at the development work was a success. But the happiness was a short-lived one. The villagers were no doubt enthusiastic, but even after 4 or 5 days no attempt had been made to collect the promised amounts. No body was prepared to take the job of collection of funds.

Umale knew not what to do. He sought the guidance of the B.D.O. who advised him to form a committee of the villagers for collection of funds. A meeting was again called. The attendance this time was larger than the previous one. But the job turned out to be a tough one. Umale told the meeting about his idea of forming a committee. Various kinds of opinions were expressed. Some doubted the working of the proposed committee. Some said that the construction of the village school was the job of the Development Department and not of the villagers, hence there was no need of a committee. There were many who thought it to be a thankless job. Umale met their points with patience, and explained the need for a committee. After long discussion the formation of a committee was agreed to. Then came the question of selecting the personnel. It was a very difficult task. Many names were proposed and many were opposed on various grounds. The meeting broke up ultimately without selecting the personnel.

Umale was not disheartened. Several meetings were arranged in the course of the week. After a lot of persuasion the villagers could come to an agreed decision, and the Committee was formed. The Committee worked well and within a fortnight, the major portion of the promised amounts were collected. Umale heaved a sigh of relief. "The third hurdle has been crossed," he thought.

But there was still another hurdle in the way. It was the selection of a site for the school. Each group selected a site and pressed for it. There was no agreed decision. Old feuds raised their heads again. Umale was perplexed. Some villagers suggested that the idea of a separate school

(*Continued on page 21*)

Flaying a carcass

Charmalaya

THE Government of India have approved a scheme for the establishment of a model training and production centre in hide flaying, curing, carcass and leather utilization and tanning at Bakshi-ka-Talab, Lucknow.

The scheme provides for setting up of three sections at the centre. One of them will be for hide flaying, curing and carcass utilization; the second for tanning; and the third for foot-wear and leather.

The object is to train instructors for schools to be set up in the States. These instructors will further train "Charmalaya" workers and act as supervisors in the industry.

It is expected that the centre will train 100 students each year—60 for hide flaying and 20 each for tanning and foot-wear. The selection of the students will be made on an all-India basis.

The scheme is expected to cost Rs. 17.46 lakhs. Of this, the Government of India will contribute Rs. 8.47 lakhs. The Netherlands Government has also agreed to send three experts—one for each section—and equipment for the centre at a total cost of Rs. 8.12 lakhs.

DADI & BALI

THOUGH on the wrong side of 60, Dadi is in good health. Her laughter is robust, lively and her spirit contagious. For Dadi, the whole village is a big family of which she is the head.

Dadi works in a Community Development Block holding women's literacy classes, giving lessons in sewing, embroidery, child care, etc., and generally educating the girls about their place in society. She has an amusing array of useful household goods to show. Each item has a tale to tell and Dadi cannot help relating it, for every piece has been made by one of the girls taught by her.

For the Block Development Officer, Dadi is the most important member of the team and he is always eager to send her to work in the nearby villages. No one dare annoy Dadi as she has a standing invitation from the neighbouring villages to move there. She is the Dadi of the whole Block.

In another Development Block in Rajasthan, the people of Larkana are indebted to Bali, a middle-aged woman, for the development programme. She was the first to realise the significance of the efforts being made by the project staff and under her leadership the whole village was mobilised for constructive work. A tank has been dug which has resulted in the cultivation of paddy and wheat in an area which was devoid of any cultivation before. Schools for children have been opened and many other items of welfare work among women and children have been taken up.

Sometimes amazing reports are received about the awakening taking place among women in the rural areas. Recently there came a report that all the members elected to a new panchayat are women.

Comprehensive Programme

These are but a few examples of the progress being made by women. In the Development Blocks a detailed programme of work among women and children is drawn up, according to the degree of progress made by the villages concerned. A primary programme is prescribed for such Blocks which have been newly started and a secondary one for those which are a little advanced. In the case of villages under the Community Development and post-intensive Blocks, where work has been going on for two or three years, a more comprehensive programme is being considered.

Women Social Education Organisers with the help of the *Gram Sevikas* and the B.D.Os draw up the plans on the above lines. The plan envisages a comprehensive programme for better status for women. In the beginning, however, such items of work are included which can easily be taken up by women. They are :—

(1) Home improvement—Efforts are made to provide in the houses proper light and ventilation, kitchen gardens, and smokeless chullahs. Women are taught to arrange the utensils in the kitchen and other household wares in an orderly manner. They are

told to dig compost pits not too near the house.

(2) Health and sanitation—Arrangements are made for giving instructions in family planning, mother and child care, etc., by health visitors and midwives. Women are also encouraged to avail themselves of the assistance and services provided at Primary Health centres and sub-centres.

(3) Recreational and cultural activities—Puppet shows, plays, film shows, exhibitions, etc., are organised.

(4) Craft—Some useful craft like making garments, spinning, weaving, basket and chick making, etc., is taught to the village women to provide employment.

As a result of the above activities, when women have become familiar with the welfare scheme, they can take up the following more elaborate programme :—

(a) Mahila mandals—Mahila mandals are formed which meet twice a month. These mandals start as Bhajan mandalies, but gradually some time is devoted to talks and discussions on subjects like mother and child care, personal hygiene and health, food and nutrition, etc. A creche or a nursery may be provided at the mandals for younger children and a play centre or park opened for older ones.

(b) Literacy — Literacy classes are held five times a week for girls between the ages of 12 and 25.

(c) Care of the Sick—Lessons are given on how to nurse persons during common ailments and diseases and about diet and cleanliness.

CO-ORDINATION

In addition to the work going on in the project areas, another agency which is doing substantial work in the field of welfare for women and children is the Central Social Welfare Board. Steps have, therefore, been taken to co-ordinate the activities of the Board and Community Development Blocks in such a manner that the two programmes will be carried on in closest co-operation for the general benefit of rural women and children.

A Welfare Extension project run by the Central Social Welfare Board covers 25 villages, say roughly one-fourth the number covered in a Community Development Block. It has now been recommended that a Welfare Extension project may be located in each Community Development Block, consisting of about 100 villages.

The programme is being carried out through the Project Implementing Committee. The Central Social Welfare Board selects the Chairman of the Committee and eight other non-official members. The District Collector nominates three officials including the Block Development Officer and three non-officials.

The three-year programme in the Block will be drawn up by the Project Implementing Committee and approved by the Block Advisory Committee. Assistance from the Community Development programme will be provided by way of services, staff and funds.

Further, to enlist voluntary effort for development activities and to bridge the gulf between the rural and the urban population, the services of educated women, social workers, members of the Bharat Sewak Samaj, college students and philanthropic organisations have also been utilised. More and more social welfare camps are being organised and these social workers go to the villages, help the villagers to clean their homes and streets, to bathe the children, and demonstrate better methods of cooking and the use of smokeless chullahs.

TRAINING

From the very beginning it was realised that unless women workers were available in adequate numbers, the programme of women's welfare would not make much headway. Proper training thus formed an integral part of the programme among women and children. At present there are 14 Social Education Organisers' Training centres

functioning and more are to be opened later. 991 Women Social Education Organisers have already been trained and another 239 are under training.

Gram Sevikas

In addition, the Central Social Welfare Board has a programme of training 6,000 Gram Sevikas through the Kasturba Gandhi Memorial Trust Training centres. Similarly, through the 25 Home Economics wings and 2 Home Economics centres attached to Extension Training centres, the Ministry of Food and Agriculture are trying to train about 3,500 Gram Sevikas by the end of the Second Plan period. Each Community Development Block is provided with a Woman Social Education Organiser and two Gram Sevikas. In the N.E.S. Block, while there is place for a woman S.E.O., there are no Gram Sevikas.

The personnel required for the Primary Health centres and Maternity and Child Welfare centres are being trained by the Health Ministry. So far they have trained 361 health visitors and 393 auxiliary nurse-midwives.

Gram Lakshmis

In some States a system of building up local woman leadership and a term of social workers has also been taken up. These women leaders are known as *gram lakshmis* or *griha lakshmis*.

After short orientation courses, these women spare some time and work in their own villages helping others to improve their homes and families.

It is proposed to lay more emphasis on this aspect of discovering and developing leadership amongst the local women in the villages through short training courses, camps, etc.

The Community Development programme today covers 2,152 blocks with a population of about 149.11 million. In the Development Blocks 70,000 adult literacy centres and 3,378 demonstration-cum-training centres in rural arts and crafts have already been opened. The number of maternity and child welfare centres opened so far is 1,259 and thousands of children's parks have been established in the villages. The number of primary health centres opened is 3,859.

SANITARY INSPECTOR

A SANITARY Inspector's work is directed towards removing or neutralizing sources likely to spread disease or exert a harmful or unpleasant effect on living. All the duties imposed on him by law or by orders, regulations or directions issued from time to time by the employing authorities—local bodies, district boards, government departments, etc.—are performed under the general direction of the Health Officer. For that purpose, premises, factories, working places, shops, dairies, etc. are entered at all reasonable hours to carry out sanitary inspection for the enforcement of health laws. Persons found violating the laws or carrying on offensive trade are prosecuted.

The whole area of his jurisdiction is visited systematically and at regular intervals, to maintain awareness of the sanitary conditions prevailing and to supervise the work of the subordinate staff engaged in street cleaning, night soil removal etc. Eating houses, shops and places where meat, fish, milk and other food articles are, for public consumption, processed, cooked or sold are inspected to ensure that all eatables are pure, are prepared under hygienic conditions and are not contaminated by filth, insects or other infectious media. Any lapses noted are reported to the Health Officer for enforcing on the defaulters necessary remedial measures. Samples of food, drink and drugs are obtained for checking adulteration and are submitted for examination and analysis in the laboratory of the health department.

Wells, tanks, reservoirs etc., are also examined to ensure the purity of drinking water and effective measures are taken to destroy or prevent the breeding of mosquitoes. Any infection or epidemic occurring within the jurisdiction is reported immediately to the Health Officer or superior authority, help is given in the removal to hospitals of patients suffering from an infectious disease and the work of disinfection or disinfestation is performed or supervised after the occurrence of such cases. Births and deaths occurring within the area are also verified.

As an intermediary between the Health Organisation of a local body and the community, the aim of the health measures introduced are explained to the public with a view to rousing health consciousness and healthy habits of life. The health education of the public is carried out by popular addresses with or without the aid of slides or cinematography.

A good deal of the time is spent in inspecting the areas assigned to him. Hours of work are fixed; a certain number of holidays are allowed, and service conditions are governed by prescribed rules and regulations.

To qualify as a sanitary inspector, applicants have to be matriculates and should have completed the prescribed course of training which is generally of about 12 month's duration and is undertaken at a recognised sanitary inspectors' training institute. There is generally no age restriction, but young men below 25 years are preferred.

Subjects of study include hygiene and sanitation, vital statistics, public health administration, elementary physiology, bacteriology and parasitology. Students have to undergo practical training in all aspects of the work and duties of a sanitary inspector. For this purpose they have to visit health centres, social education centres, slum areas, Government and municipal health departments, water works and sewage treatment works, child health and maternity centres, factories and analytical food laboratories, etc. Training facilities are available in most of the States, and in all nearly 1,000 sanitary inspectors are trained annually.

The cost of training varies from Rs. 15 to 25 per month as tuition fee; the cost of living Rs. 60 to Rs. 80 per month.

Further training can be obtained by undergoing short courses in anti-malaria work,

food inspection, smoke abatement, rural sanitation, B.C.G. vaccination, etc. The duties cover a wide field. It is becoming more and more the practice with sanitary inspectors to specialise in one or the other of the principal duties.

The personal qualities necessary for the job are an ability to educate people, strict honesty and courteous behaviour when dealing with the public and capacity to control labourers and to enforce order. An inspector has to be conscientious in his work as he has great responsibility for ensuring hygienic conditions in the community.

Entry into the service is by applying to the local bodies or the Directors of Health Services of the States for employment. Many posts are filled through advertisements in the press. As there is still a great shortage of sanitary inspectors, jobs are easily obtainable.

Openings for sanitary inspectors are usually available in Government departments, Railways, Community Projects, factories, industrial concerns, district boards and local bodies.

Salaries offered vary from place to place. The starting salary is usually between Rs. 60 and Rs. 100 and the maximum of the scale varies from Rs. 120 to Rs. 200 per month. Dearness and other allowances are frequently admissible.

Prospects for advancement to posts of chief sanitary inspector exist in the Railways and the bigger local bodies. Inspectors specialising in fields like anti-malarial operations, etc. are often paid extra allowances or special pay.

For further information on training facilities and employment availability you may contact :

1. The Superintendent|Principal|Director of the Medical College or public health institute offering training facilities, near your home.

2. The Director of Health Services of your State.

3. The Employment Exchange nearest your home.

EMPLOYMENT OUTLOOK

Shortages of sanitary inspectors are reported from almost every State. Great stress has been laid on the improvement of public health facilities during the Second Five-Year Plan period. During that period the country will need nearly 40,000 sanitary inspectors or health assistants. There are now not more than 7,000 trained sanitary inspectors in India. To meet the needs of the country the existing training facilities are likely to be increased by six times. There is also a proposal to upgrade and remodel the existing sanitary inspector's course to a two-year course aimed at producing adequately trained "health assistants", the proposed new designation for sanitary inspectors.

Considering the duration and cost of training and the availability of immediate employment the preparation for this career is easy and rewarding. The profession offers responsible careers to young men fond of out-door life and devoted to social service.

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Brick Making

Sir,

During the summer, villagers often make bricks. They do not know the correct process as how to bake them. Naturally, therefore, they seek the help and guidance of the Gram Sevaks. But the Gram Sevaks fail to demonstrate the process as they themselves have got no practical knowledge. In the training centre they are only taught the theoretical side of brick making. Since it is an important need of the villagers, the Gram Sevaks should be given some practical training in the subject.

Yours etc.,
R. D. Gupta,
Gram Sevak.

Ajnar C.D. Block,
Lahar (M.P.)
15-6-58

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Sikandar Bagh of Lucknow

TWELVE miles from Lucknow on the road to Kanpur, there is a place called Banthra. Till a few years ago, Banthra was a dry and dusty piece of land, good for nothing, except for being used occasionally as a site for military camps. In the course of the last one year, however, this place has undergone a virtual transfiguration. Today, it is one of the greenest spots in Uttar Pradesh, with more than 2,000 varieties of flowers, herbs and other plants.

Banthra's new opulence owes itself to its selection, a little more than a year ago, as the location for one of the extension nurseries of the National Botanic Gardens, Lucknow.

The flourishing extension nursery at Banthra is one of the many projects in progress under the auspices of the National Botanic Gardens, and constitutes the Garden's major field for conducting experimental studies on reclamation of land and cultivation of a large variety of aromatic, medicinal and commercial plants.

India is very rich in plant resources. The lower Himalayan regions are known to have a wide range of medicinal and other plants growing in natural state and in great abundance. Until very recently, however, no proper assessment of India's plant resources has been made, nor has the possibility of their systematic cultivation fully explored. In view of the importance of this work, both from the point of view of advancement in medicine and other fields, India's Council of Scientific and Industrial Research took over the century-old Sikandar Bagh at Lucknow from the Uttar Pradesh Government for developing it as the National Botanic Gardens.

The garden's most valuable activity consists in the collection, introduction and systematic cultivation of plant varieties of standard quality. The laboratories attached to the garden are designed to undertake applied research on raw materials so collected and to explore the possibility of commercial utilisation of this material. On the findings of the research carried out in this manner depends further development of some of the major Indian industries such as manufacture of drugs and pharmaceuticals, paints and varnishes, essential oils and perfumes, mucilages and gums, fibres, leather and the large collection of miscellaneous industries going under the name of chemical industries.

20,000 Plants Collected

This work calls for assiduous, painstaking and steadfast studies and research. Field parties consisting of botanists and medical research workers experienced in this field are sent out every year to far-flung parts of the country, from Kashmir to Kerala and from Saurashtra to Assam, to survey plant resources and to collect specimens of plant varieties of every region. Last year alone, more than 20,000 plants were collected as a result of these botanical excursions.

After collection next step is correct identification and systematic study of the characteristics of the collected material. For this purpose, a herbarium and a museum have been specially organised as part of the National Botanical Gardens.

At the herbarium of the Lucknow Gardens today visitors can see more than 50,000 specimens of plants of various kinds. Besides a large variety of Indian plants, the herbarium has on view some interesting plants from several foreign countries. There are some very interesting exhibits from U.S.A., Australia, Canada and parts of Africa.

Since April 1953, the administrative, financial, and policy control of the Botanic Gardens, Lucknow have been taken over by the Council of Scientific and Industrial Research, which has been spending large sums of money, thought and effort in making these Gardens into one of the country's major botanical research centres. With the result, that today the laboratories attached to the Gardens are in a position to tackle applied research of the most

complex type to ensure adequate supply of large needed raw material of high quality and uniformity to feed rapidly growing chemical and other industries.

The process of development of these gardens started in 1953 still continues. A stately modern building to house the various research laboratories is nearing completion on the garden site itself. There have been improvements in many other directions. Special mention must be made of the addition in recent months of germination and propagation beds, construction of a large fern house, a new orchid house, and a foliage shed to shelter the large collection of delicate plants. These improvements are all designed to help the National Botanical Gardens serve its purpose more effectively.

Total Collection

Since the taking over of Sikandar Bagh in April 1953 by the Council of Scientific & Industrial Research, more than 2,500 varieties of plants have been added to bring the total number of collection to 4,637. The collection includes 650 medicinal and aromatic plants, 70 fruit trees, nearly 650 varieties of roses and of chrysanthemums, 270 cannas, 455 foliage plants and a profuse varieties of ornamental trees , shrubs and creepers, ferns, palms and cycads, cacti and succulents, bulbous plants, orchids, water plants, and seasonal flowering annuals.

An Information and Publicity Section has been organised to collect, collate and disseminate information by publicising findings of research and their application to the solution of industrial problems.

Technical aid has been rendered by (1) answering technical enquiries and giving advice, (2) supply and identification of plant material, (3) providing facilities to students to promote botanical study, (4) organising Flower Exhibitions and catering for visitors, and (5) giving training in Horticulture and other associated activities to garden staff and outsiders.

Advice has also been rendered in establishing or maintaining various types of gardens and in organising and judging Flower Shows. Plants and seed exchange and sale of nursery plants has been carried on with experimental stations, Botanical and Horticultural gardens and individuals in India and in different parts of the world.

Bows and Arrows—the Adivasi weapons

BIHAR

PATNA is the capital city of the State of Bihar. Among the places of attraction for visitors to this city mention may be made of Raj Bhawan, Secretariat, High Court, Museum, Gol-Ghar, Oriental Khuda Baksh Library, Sachchidanand Sinha Library and Har Mandir (birth-place of Guru Govind Singh).

Nalanda is located at a distance of 55 miles to the south-east of Patna and is well-known for the remains of the world-renowned ancient Nalanda University. A research institute known as the Nava Nalanda Mahavihara has been started for research and higher studies in Pali literature and Buddhist Philosophy.

Rajgir situated at a distance of 62 miles from Patna, is the old capital city of the Magadha Empire. It is famous for its hot-springs and historical sites connected with the lives of Gautam Budha and Vardhamana Mahavira.

Bodh Gaya is located at a distance of 7 miles from Gaya and is famous as the place of Enlightenment of Lord Budha. Every year the Mahabodhi temple and the Bodhi tree are visited by thousands of Buddhist pilgrims from all over the world.

Vaisali is located at a distance of 22 miles from Muzaffarpur and is the birth-place of Lord Mahavira. It was once the capital city of the ancient Indian Republic of the Lichchhavis.

Pawapuri is located at a distance of about 55 miles from Patna on the Patna-Ranchi road. It was here that Lord Mahavira shuffled off his mortal coils. The Jal-Mandir is visited by thousands of Jain pilgrims every year.

Deoghar (the Abode of the Gods) is at a distance of 4 miles from the Jasidih junction on the Eastern Railway. It is famous for the ancient temple of Lord Shiva (Vaidhanath) and each year is visited by thousands of pilgrims on the occasion of the Vasanta Panchami, Shivaratri and Bhadra Purnima.

Ranchi is the summer capital of the State of Bihar and is situated at a height of 2,128 ft. above sea-level. The famous Hudru and Jonha falls are located at distances of 28 and 25 miles from Ranchi respectively. The Mental Hospital at Kanke is 7 miles off Ranchi and the T.B. Sanatorium at Itki is at a distance of about 14 miles from Ranchi.

Jamshedpur popularly known as "Birmingham of the East", is at a distance of 130 miles to the south-east of Ranchi. The famous Tata Iron and Steel Works and several other factories are located in this town.

Sindri is at a distance of 16 miles from Dhanbad and is renowned for its fertilizer factory, the biggest of its kind in Asia. A superphosphate factory has also been established by the Bihar Government.

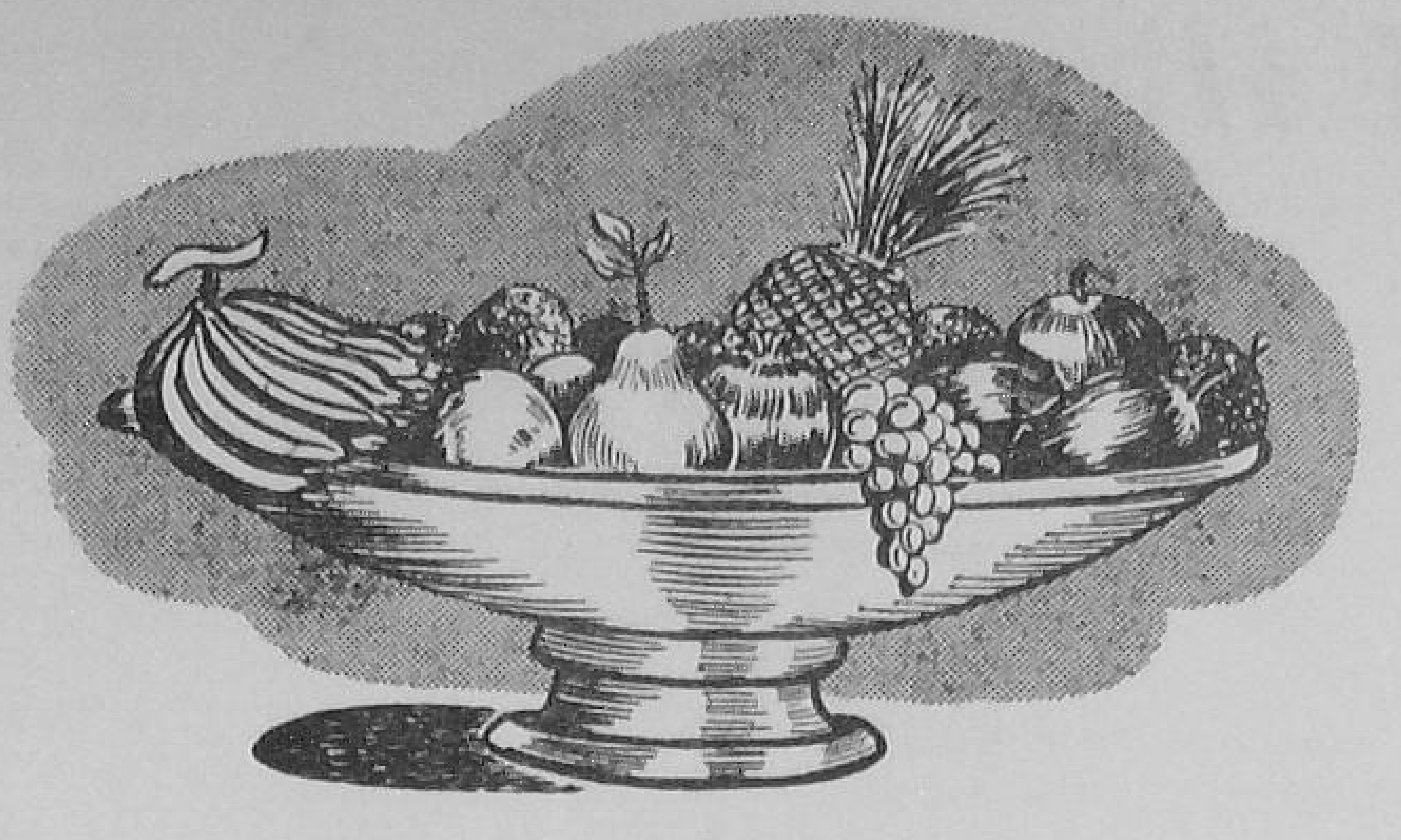
Bokaro is well-known for its Thermal Power Station of the D.V.C. with a capacity of 2,25,000 K.W.

HURDLES CROSSED

(*Continued from page 12*)

building should be dropped otherwise there would be no end to village feuds. The Gram Sevak was not prepared to accept the suggestion. His earlier successes had convinced him that all differences could be resolved through persistent discussions. Umale again succeeded in his task. Through long persuasions he could make the villagers agree to a suitable site.

The miracle has happened. The new school building is complete. Villagers take pride of it, and simply laugh when they are told how at different stages they fought against the idea. Their attitude towards development work and community life is totally changed. They are eager to help and co-operate with works which will benefit the village as a whole. That is the reason why, today, besides the school building Khandvi has got its own veterinary dispensary building, Panchayatghar, a Youth Club, a small children's park and a Balak Mandir. Behind all these works remain the untiring efforts of Umale. He has become one with the village community. Khandvi is no more a house divided. It is a united one. It is now one of the most progressive villages of Jalgaon C.D. Block, and the happiest man in it is Umale, now in charge of the model seed farm.



Ginger Preserve

GINGER is the underground stem or rhizome of the perennial plant Zingiber officinale. It is widely used as a flavouring material in confectionery, ginger beer, chutneys and other culinary preparations. The Jamaican variety of ginger yields the finest flavoured beverages. The preserves of candied ginger has a sharp sweet taste. The Canton variety, extensively grown in Canton (China) is juicy and succulent with a rich flavour and gives the best preserves and candy. The Indian variety is comparatively hard and knotted. The method of preparation of ginger preserve (which can be converted into candy, as and when required) is given below :

Selection of Raw Material— Select tender, fibreless and large sized rootlets or fingers 3-4 months old. Ginger grown on sandy loam gives a very good product.

Preliminary Washing — —Wash the ginger thoroughly to remove all traces of dirt and adhering matter.

Preparation of the Material —Scrape off the skin of the ginger with a sharp stainless steel knife and cut it into pieces of the desired shape and size.

Softening Ginger — Soften the ginger by (1) boiling it in 0.5 per cent solution of citric acid (quantity of the solution being sufficient to cover the ginger) in a covered aluminium, stainless steel or heavily tinned brass or copper vessel for a period of six hours or (2) cooking in 0.5 per cent solution of citric acid at 10 lb. steam pressure in an autoclave for one hour. Citric acid is used to bleach or whiten the colour during softening.

Pricking of Pieces — Remove the ginger and wash it well with cold water. When sufficiently cooled, prick the softened pieces with stainless steel, or wooden pricks. Wash again. The ginger pieces are now ready for impregnation with sugar syrup.

Preparation of Syrup—Prepare 30 Brix syrup by dissolving 3 parts of sugar in 7 parts of water. Boil and filter the syrup through a thick muslin cloth. (Use about 1 lb. of syrup for 1 lb. of the prepared ginger).

Impregnation of Ginger with Sugar Syrup—Boil the prepared ginger in the 30 deg. Brix syrup for 15 minutes and allow it to stand overnight, ginger being completely covered by the syrup. After about 24 hours, drain off the syrup and increase its concentration to about 35 deg. Brix by adding more sugar and heating if necessary. Boil the ginger with the syrup for 15-20 minutes and keep it again overnight taking care to have the ginger always covered by the syrup. Repeat this every day, till the concentration of the syrup is about 60 deg. Brix. At this stage add a small quantity (about 0.1 per cent of the total weight of the syrup) of citric acid or tartaric acid or 5 per cent by weight of invert sugar or corn syrup. Carry out the process of absorption through increase in the strength of the syrup by 5 deg. Brix each day, till it reaches 75 deg. Brix. The preserve is then ready to be packed.

ICAR PUBLICATIONS

Below are given a list of some informative pamphlets in English, Hindi and Punjabi brought out by Indian Council of Agricultural Research, Queen Victoria Road, New Delhi. The Business Manager of ICAR will be glad to provide any further information which may be desired by our readers.

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2.	The Key Village Scheme	-do-	50

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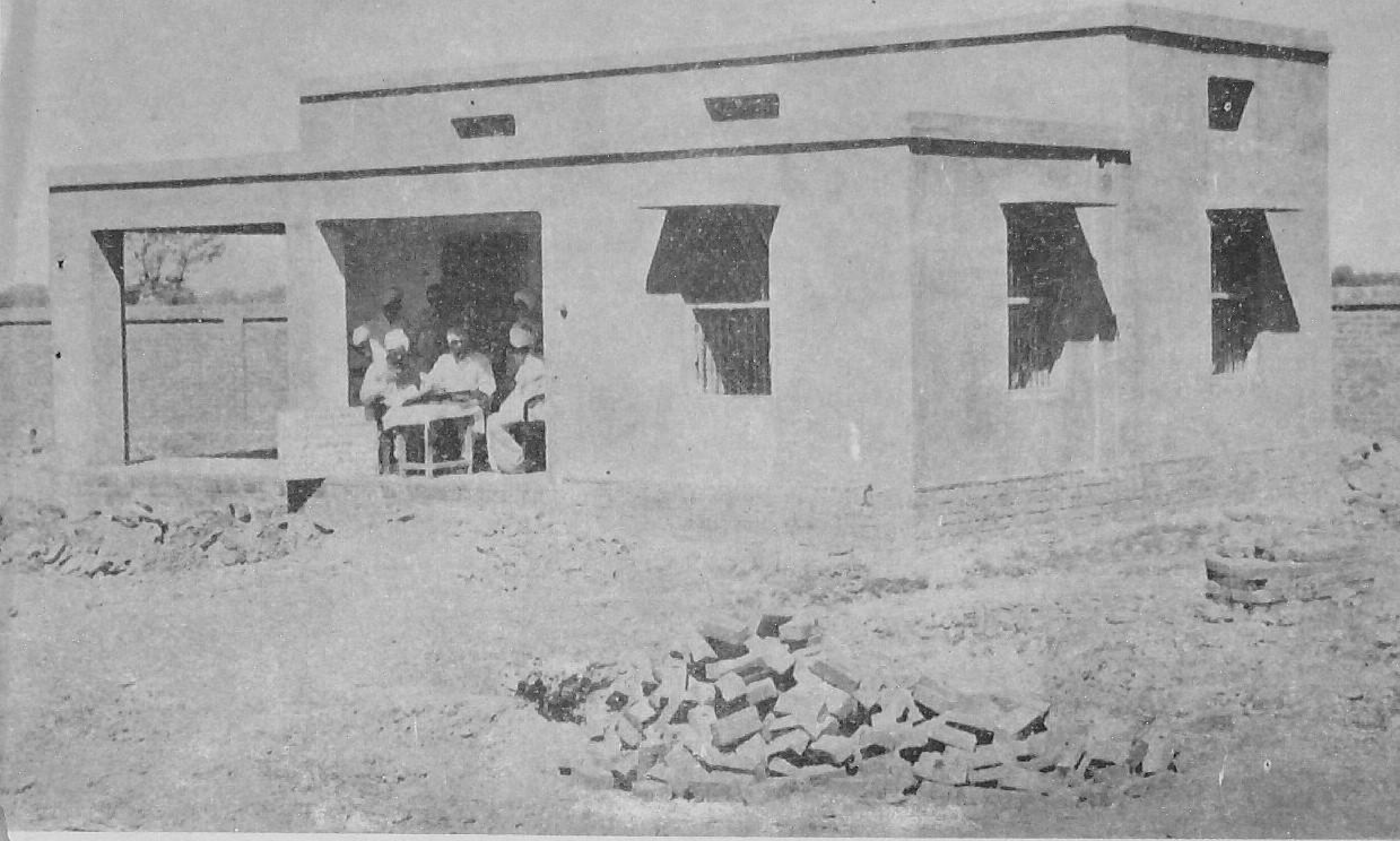

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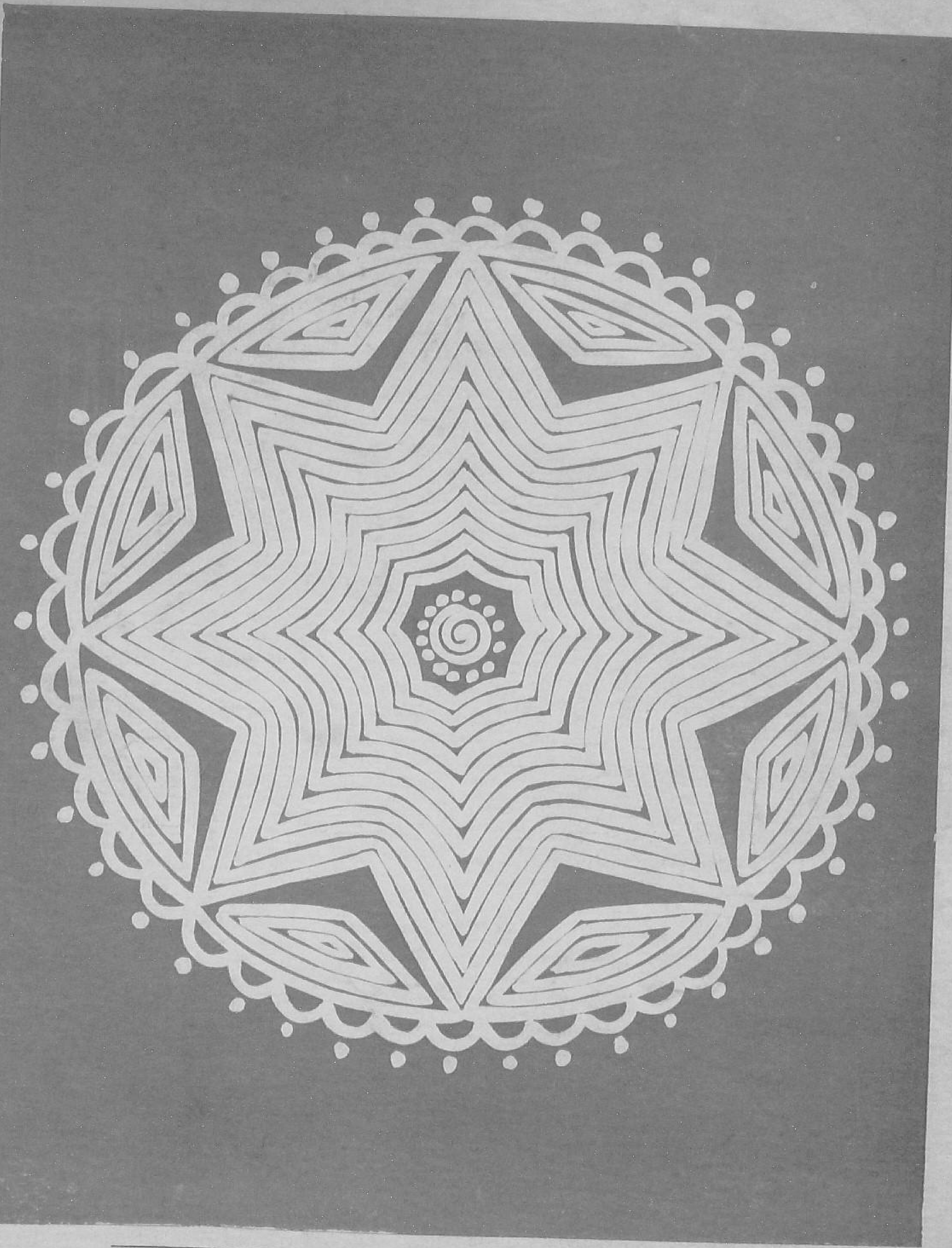

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